

#1040760
12/13/2004

Climate risk 'to million species'

By Alex Kirby
BBC News Online environment correspondent

Climate change could drive a million of the world's species to extinction as soon as 2050, a scientific study says.

The authors say in the journal *Nature* a study of six world regions suggested a quarter of animals and plants living on the land could be forced into oblivion.

They say cutting greenhouse gases and storing the main one, carbon dioxide, could save many species from vanishing.

The United Nations says the prospect is also a threat to the billions of people who rely on *Nature* for their survival.

Seeking cooler climes

In a report, *Extinction Risk From Climate Change*, the scientists describe their study of the six biodiversity-rich regions, representing 20% of the Earth's land area.

The study used computer models to simulate how the ranges of 1,103 species - plants, mammals, birds, reptiles, frogs, butterflies and other invertebrates - are expected to move in response to changing temperatures and climate.

The scientists considered three different possibilities - minimum, mid-range and maximum expected climate change, on the basis of data from the Intergovernmental Panel on Climate Change.

They also assessed whether or not animals and plants would be able to move to new areas.

Mission improbable

They concluded that from 15 to 37% of all the species in the regions studied could be driven to extinction by the climate changes likely between now and 2050.

Species at risk include:

- Boyd's forest dragon, an Australian lizard likely to lost at least 20% of its range
- South Africa's national flower, the king protea, and its relatives
- *Virola sebifera*, a Brazilian tree whose entire range is likely to have vanished by 2050
- the Scottish crossbill, found only in Scotland: its survival could demand an improbable migration to Iceland.

The study's lead author, Professor Chris Thomas, of the University of Leeds, UK, says: "If the projections can be extrapolated globally, and to other groups of land animals and plants, our analyses suggest that well over a million species could be threatened with extinction."

Some species will no longer have any climatically suitable habitat left, and others may be unable to migrate far enough to reach hospitable surroundings.

The authors say: "Many of the most severe impacts of climate change are likely to stem from interactions between threats, factors not taken into account in our calculations, rather than from climate acting in isolation."

They single out as examples habitat fragmentation and loss, and competition from new invasive species.

But they have some encouragement as well. They say the minimum expected climate change scenarios for 2050 - the change they regard as inevitable - would mean about 18% of the affected species would vanish.

Reversing the trend

The medium projections suggest an extinction rate of 24%, and the highest one of 35%.

They conclude: "Minimising greenhouse gas emissions and sequestering [storing] carbon to realise minimum rather than mid-range or maximum expected climate warming could save a substantial percentage of terrestrial species from extinction."

John Lanchbery, of the UK's Royal Society for the Protection of Birds, has studied the science and diplomacy of climate change for many years.

He told BBC News Online: "It would appear there is really nothing we can do to avoid at least some extinctions. We are bound to be near to the study's minimum scenarios, even if we can avoid the higher ones."

Dr Klaus Toepfer, the head of the United Nations Environment Programme, said: "If one million species become extinct... It is not just the plant and animal kingdoms and the beauty of the planet that will suffer.

"Billions of people, especially in the developing world, will suffer too as they rely on Nature for such essential goods and services as food, shelter and medicines".

Story from BBC NEWS:
<http://news.bbc.co.uk/go/pr/fr/-/1/hi/sci/tech/3375447.stm>

Published: 2004/01/07 18:01:33 GMT

© BBC MMIV